SOUTH FLORIDA WATER MANAGEMENT DISTRICT (SFWMD)
WATER RESOURCES ADVISORY COMMISSION (WRAC)
LAKE OKEECHOBEE COMMITTEE MEETING – February 22, 2006
Okeechobee Civic Center, 1750 N Highway 98, Okeechobee, FL
9:00 a.m. – 4:00 p.m.
MEETING REPORT – February 27, 2006

INTRODUCTION:

- **This is a summary of the seventh WRAC Lake Okeechobee Committee meeting**.
- Committee Chair and SFWMD Governing Board member Malcolm "Bubba" Wade introduced Okeechobee County Commissioner Alvin Posey.
- The committee heard presentations about:
  - Lake Water Operations
  - Lake Inflows and Outflows
  - Lake Okeechobee and Estuary Restoration Plan and Water Conditions
  - Lake Okeechobee Watershed (CERP) Projects
  - Sediment Dredging
- The Committee discussed a paper by member Ken Todd regarding committee process for sorting through action steps and options (see attached Summary of Initial Options/Fixes List).
- Lake Okeechobee water level was 15.48' on 2/22/06.
- Lake Okeechobee Committee presentations will be posted to http://www.sfwmd.gov, "Governing Board/WRAC".

ISSUES/DISCUSSION BY COMMITTEE:

- **Member Issues:**
  - The lake fishery has collapsed. Little or no submerged aquatic vegetation is growing in the lake because of continuing turbidity. Lake is ¾' higher than this time last year. Need to get the level down if the lake is to have any chance at recovery. Stakeholders need to share adversity. STA ¾ has not been able to take lake water for treatment as intended, so advisability of continuing to spend money on CERP and LOER projects is questionable. Lake is dying and it will take a very long time to recover.
  - Virtually no fishery left on south part of lake. If this continues into next year all of the people who come to fish will go elsewhere. Need to do something drastic now. Must clean up lake water to help the estuaries because of the discharges. This committee needs to do something right now.
  - Recommend all Committee members read the National Academy of Sciences report "Re-engineering Water Storage in the Everglades" (Link: http://www.nap.edu/cfatalog/11215.html). The report should be summarized and presented at next committee meeting.

Committee needs to take action: determine what can be done by when.
    - Where is this Committee going? Is task to produce a report with recommendations?
    - Committee finds itself in same place Governor's Commission for a Sustainable South Florida was when crafting recommendations about the "C&SF Restudy" in the late 1990s. Committee is struggling with the search for answers to very difficult questions about functioning of the lake and estuarine ecosystems. LOER is a start, but much more need to be done and the committee will have to continue to grind it out – there are no "silver bullet" answers. The committee needs to work on determining needs of the estuaries and the lake. It may require dredging, implementation of ASR, etc.
    - We need the pulse releases. It has not been happening as many had hoped for.
    - Level 1 pulse releases will continue through until June.
    - A level 1 pulse release is only .1' on the lake.
    - Committee needs time to brainstorm. When we began members were told no ideas would be left off of the table. Need to address the predicted wetter cycles. We need to have information that helps us understand the cycle we're in and then adjust operations and program options to that.
    - Modeling done for the Yellow Book (C&SF Restudy) was good, but we're in a wetter cycle. The "WSE" schedule tends to cause water to be "hoarded". Need to adjust WSE schedule to a wetter cycle.
    - Need to recognize short-term and long-term actions: Here are some short-term:
        - Muck Removal/Sediment Dredging/Filter Technology
        - Reconfigure discharge structures to take water off the top or in the middle vs. at the bottom. May reduce sediment loading.
        - Pulses at higher volumes vs. smaller, continuous pulses.
        - "To Spray or Not to Spray?"
    - In 1985, SFWMD asked COE to model the options for discharge at the top, middle or bottom of the structures. There is a paper on the subject.

- **Lake Water Operations Update (Bob Howard) - Discussion:**
    - Storage and release of water is limited by water quality requirements.
    - Window for the lake drawdown is very important, especially given the length of time needed to achieve drop sufficient to benefit lake ecosystem. Response: There is no capacity in the Water Conservation Areas. Local rainfall has been filling up the STAs.

- **Lake Inflows/Outflows and Phosphorous Loads (Cal Neidrauer) – Discussion/Questions and Answers:**
    - Several members asked questions about or discussed:
        - practical examples for use of climate data in determining the lake regulation schedule,
        - whether models used to develop the WSE schedule recognized the wetter period brought about by the Atlantic Multidecadal Oscillation, or "AMO" (since 1995);
        - whether a synthetic data set could be introduced and used in modeling to recognize the wetter cycle,
        - How will planning be done to deal with increased Phosphorous loads coming into lake during wetter cycle?
        - This will impact upcoming revision to the Lake Okeechobee Protection Plan and will have ramifications for the Lake Okeechobee Watershed Plan projects.
        - What can be done now operationally, to get the lake level down and recognize the wetter cycle? Response: Temporary Forward Pumps, more storage, implementation of supply side management at lower levels.
        - Changing the schedule will also help.
        - What is meaning of "demands not met" as used in the schedule backup? Response: It is a benchmark using performance measures pulled from EAA and Lower East Coast Regional Water Supply plan data.
        - Suggest noting Hurricanes Charlie, Frances, Jeanne and Ivan on Mr. Neidrauer's charts.
        - The modeling used for the development of "WSE" schedule did not include any data from north of the lake. This needs to be dealt with during development of new schedule.
        - A few adjustments over a few years is not enough.
        - 2.2 million acre feet discharge/year during the recent wet years. How will the new schedule deal with that.

PUBLIC COMMENT:

- People in Lee County and Sanibel are very concerned about ability of seagrasses to re-emerge. Facing collapse of the estuary. Support fast track projects, but need more storage and treatment. As marshes come back will filter out sediment. Need action sooner than later.
- "WSE" was to have meant "Water, Supply and Environment" but we've not seen the "environment" side of it. Need an adaptive management schedule in real time. "WSE" allows for "hedging" as provided in the addendum. COL Carpenter has not responded to Nat Reed letter, copy provided to this committee. "Needs not met" provided a certain delivery of million acre feet but proof is in each drought with record sugar crop

production in each of those droughts. Proposed putting in ocean outfall to discharge lake water and bypass the estuaries.

- **Lake Okeechobee and Estuary Recovery (LOER) Plan Update (Susan Gray) - Discussion:**
    - Questions about when ASR will be implemented. Need to get answers about impediments, requirements and what it will take to get ASR moving.
    - What is the time line for the new Supply Side Management Plan? Plan is to have a draft by this Summer. Development of plan will coincide with Corps' schedule for development of new regulation schedule.
    - Questions were asked about the LOER goal for land use changes and reevaluation of Environmental Resources Permit requirements. Result will be to require more storage and treatment of water up front. New Best Management Practices (BMPs) requirements will require full compliance. The outcome should be that if BMP requirements are met, the Total Maximum Daily Load for the lake will be met.
    - Need to better understand the Rural Land Stewardship Program. Staff will contact Fl. DCA and get a presentation lined up for the committee.
    - Piping water into ocean simply transfers the problems from one ecosystem to another and is not a good solution.

- **Lake Okeechobee Watershed Project Update (Dave Unsell) - Discussion:**
    - Spending up to $1.2 billion and the total impact won't have a substantial impact on lake levels? Ans: CERP process forces evaluation of individual projects and causes a loss of perspective on the impact of the project in context of other planned projects and efforts. Project alternatives will be cost effective and meet water quality goals.
    - Is Paradise Run wetland restoration still going to be done? Yes
    - Suggest staying away from cultural resources on the Moorehaven Sugarcane Farm.
    - American Swallow-tailed Kite critical habitat near Fisheating Creek is unique. Need to avoid impacts.
    - How will plans effect public access to Fisheating Creek from Lake Okeechobee? Ans: need to look at that. Planning use of an inflatable weir that will be periodically navigable.
    - How do the LOWP projects tie in with LOER, Kissimmee Basin projects and regulation schedules and the proposed WSE schedule revisions? Need to know where we are on all those and how they should be tied in together.

- Is 130 tons phosphorous reduction an appropriate goal given more years in a wet cycle?
- Does the CERP team have the ability to change or adapt? If not it needs to.
- Next added increment analysis was a way to ensure Congress that the best projects possible would be planned and implemented.
- Need to buy land now for extra storage. Need to treat and release stormwater in basin in which generated.

- **Lake Okeechobee Sediment Dredging (Susan Gray) – Discussion:**
  - How long will it take to bind sufficient phosphorus to get to target 40 parts/billion using alum? 15 years but need to revisit the calculations.
  - Alum treatment could be impacted by hurricanes. Not a great option.
  - Sediment dredging: need to apply for permits now, if it becomes a viable option for helping the lake. Need to look at cost of disposing the sediment via trucks or building islands from the sediment.
  - Need to send out the message we are looking for proposals to dredge the sediment.
  - Had always discussed a levee system for Kramer Island. Could dispose sediment there.

- **Ken Todd's Paper – Discussion -** OPTIONS:

GOALS:

- Lower the Lake Levels
- Reduce Peak Discharges to the Estuaries

Agree?
Add –e.g. Increase "P" Reduction
Short Term Options/Fixes
Long Term Options/Fixes

- Dredging sediments
- Reconfiguration of Discharge Structures (discharge at middle of stage to send less sediment downstream)
- Pulse Releases vs. continuous low volume discharges
- "To Spray or not to Spray?"

- Zebra Mussels or Native Mussels
- Mid level or top discharge structures of benefit to lake and or estuaries? S65, Nubbin Slough, etc.
- Have the Spray Meeting in Clewiston (postponed due to H. Wilma)

- TDRs/Leaving more areas green

- Biological Conservation/Biodiversity Plan for the Lk. O Watershed (Cara Caras not helped by CERP LOWP) Reiterate benefits.

- Interbasin Transfers – Use excess water in SWFWMD; SJR or Big Cypress basins. Expands on Ken's Southern Flowway concept. Convey as much out of system (slowly/continuously) when too much.
- Study (need to better understand) EAA Flow Way idea.

- Review all ideas; set priority on those that benefit natural system sooner
- Land acquisition.

- Expand water storage east and west of Lake. IFAS Study. Design to appropriate Levels of service.

- Expand idea of flow way to south. More often than not, S12s are closed. ENP not fairly sharing adversity. S12s don't operate efficiently much of the time due to clogging.
- Rip rap/sheet pile boundaries/levees within lake

- BMPs: East and West – anything that flows to lake should not be exempt from mandatory BMPs.
- Biofiltration – purposely grow something in water to remove nutrients that could then have some beneficial use

- Understand problems/issues with ASR
- Conversion of Land Use – Owners have to further reduce "P" – discuss as equity issue
- Discuss as part of LOER update

- Short Term: Potential for lowering lake w/o bombing estuaries.
- Fwd Pumps – Temporary? Permanent? Risk to water supply?
- Long Term: BMPs – w/take 51 yrs. to bring all online? Move up the timeline for implementation.

- Get it down to 12'; temp. fwd. pumps.
- Debate re: stop at 13'? Does it stay constant? Incremental amt. for ag is 13.5'
- Problem is sending additional slug to estuaries right now.

- Why can't water go out e.coast canals that are not being used during dry season? Run more lake water south to make it up
- Look at capacities and regulation schedules.

- Alum injection
- Ocean outfall which bypasses the estuaries

- North of Lake look at leasing vs. buying land esp. in areas impacted by citrus canker.

- If lease land, store more water, need to restore wetlands (USFWS identified 90,000 acres potential wetland restoration areas/opportunities – Yellow Book limited to 3k ac.)
- Revisit the economics – intent is to add more storage opportunities (WWF/USDA programs).
- Compensate people to keep water on the land
- Sustainable ag practices

- Tweak Kissimmee Plan to hold more water north of the Lake in the Upper Kiss. basin
- Get Mia/Dade; Broward stakeholders at table to discuss providing alternative water supplies to the south.
- Process: Rejuvenate the Technical Sub-Committee – Get that report done.

- Aerate the canals to settle out nutrients and solids.
- Pipeline to pipe excess water south

- Lower East Coast Water Supply Plan/Restudy documented many ideas; could help expedite brainstorming
- SFWMD will highlight areas of most interest

- ASAP, need update on sampling sediments and muck
- Data being obtained now. W/b 1 yr. to final report. But will have incremental reports. (2 months?)

- Alternative Water Supply development – reuse; recycling; conservation

- Recommendations to Legislature on Funding (as requested by Sen. Pruitt)